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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,723	04/29/2003	Leonard Maxwell	31574-00007	6153
24318	7590	11/10/2005		
Mitchell, Silberberg & Knupp, LLP 11377 West Olympic Boulevard Los Angeles, CA 90064			EXAMINER KAPLAN, HAL IRA	
			ART UNIT 2836	PAPER NUMBER

DATE MAILED: 11/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/031,723	MAXWELL ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Hal I. Kaplan	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 January 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8, 13, 16, 18-24, 26, 33 and 34 is/are pending in the application.
- 4a) Of the above claim(s) 22-24 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 13, 16, 18-21, 33 and 34 is/are rejected.
- 7) ☒ Claim(s) 5-8 is/are objected to.
- 8) ☒ Claim(s) 1-8, 13, 16, 18-24, 26, 33 and 34 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                        |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/9/04</u> . | 6) <input checked="" type="checkbox"/> Other: <u>See Continuation Sheet</u> .                      |

Continuation of Attachment(s) 6). Other: Examiner-Initiated Interview Summary (PTOL-413B).

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-8, 13, 16, 18-21, 33, and 34, drawn to a capacitive switch, classified in class 307, subclass 116.

Group II, claim(s) 22-24 and 26, drawn to bi-directional data communication over a power line in an indication system, classified in class 340, subclass 310.06.

2. The inventions are not so linked as to form a single general inventive concept because of the following reasons:

The requirement of unity of invention referred to in PCT Rule 13.1 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features, where a "special technical feature" is one that defines a contribution which an invention, considered as a whole, makes over the prior art. See MPEP §1850.

In the instant case, the claimed special technical features of invention I are the capacitive component of the switch, the faceplate, and the control means. The claimed special technical features of invention <sup>II</sup>~~I~~ are the transmitter, the receiver, and the control device. Inventions I and II do not share any special technical features.

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3. Because these inventions do not share any special technical features for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

5. During a telephone conversation with Mr. Joseph Swan on October 18, 2005, a provisional election was made without traverse to prosecute the invention of Group I, claims 1-8, 13, 16, 18-21, 33, and 34. Affirmation of this election must be made by applicant in replying to this Office action. Claims 22-24 and 26 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Priority***

7. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Specification***

8. The disclosure is objected to because of the following informalities: Page 3, line 25 contains the word "Zero". It appears this should be "zero". Page 11, lines 24-25 contain the phrase "turn on/off, slow fadeout control for childrens bedrooms function are incorporated". It appears this should read "turn on/off, or slow fadeout control for children's bedrooms functions can be incorporated". Page 12, line 25 contains the word "overtime". It appears this should be "over time".

Appropriate correction is required.

9. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

***Drawings***

10. The drawings are objected to because of the following informalities: In Figure 1, the AC zero crossing detector 24 is connected to an unlabeled part that appears to be an AC voltage source. In Figure 2, reference numeral 48 points to a wire. The specification states that reference numeral 48 is a feedback circuit (see page 10, line 5). The specification states that the switch sensing oscillator 18 comprises a resistive component 36 connected to a sensing plate 38, and the plate 38 is mounted on, and connected to the rear surface 34 of, the face plate 16 (see page 8, lines 21-22 and 25, and page 8, line 28 through page 9, line 1). However, in Figures 1 and 2, the plate 38 is

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shown outside the switch sensing oscillator 18, and is not in contact with the rear surface 34 of the plate 16

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

11. Claims 1, 2, 4, 6-8, and 33 are objected to because of the following informalities: Claim 1 line 5, the phrase "the frequency" lacks proper antecedent basis. Claim 2 line 1, the phrase "the plate" lacks proper antecedent basis. Claim 4 lines 1-2, the phrases "the detection," "the shift," and "the micro controller" lack proper antecedent basis. Claim 6 line 2, the phrase "the micro controller" lacks proper antecedent basis. Claim 7

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line 2, the phrases "the micro-controller" and "the frequency of the mains supply" lack proper antecedent basis. Claim 7, line 3 contains the word "Zero". It appears this should be "zero". Claim 8 line 2, the phrase "the mains frequency" lacks proper antecedent basis. Claim 33 line 2, the phrase "the user" lacks proper antecedent basis. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1, 2, and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by the international patent application publication of Peter (WO 97/01835).

As to claim 1, Peter, drawn to a proximity sensor, discloses, in Figures 1 and 7(a), a switch device comprising a face plate (30) and a single switch oscillator (60) having a capacitive component, the capacitive component having a first capacitor plate (25) arranged adjacent to the face plate (30) (see page 6, line 22 through page 7, line 5), the face plate (30) preventing electrical contact between the user and the oscillator (60) whereby an object placed adjacent the face plate (30) acts as a second capacitor plate thereby altering the frequency of the oscillator (60) (see page 8, lines 10-12), control means (65,70,85) being provided to sense the change in frequency and to actuate the switch in response to such a change (see page 21, lines 5-15).



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As to claim 2, in the switch device of Peter, the face plate (30) is made from electrically insulating material (see page 7, lines 4-5 and 16-18).

As to claim 4, in the switch device of Peter, the detection of the shift in frequency of the switch oscillator (60) is achieved within a micro controller by software (see page 21, lines 16-17; page 22, lines 1-7; and Figure 8(a)).

13. Claims 16, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by the US patent of Montone (3,555,531).

As to claim 16, Montone, drawn to a visual fire warning system, discloses, in Figures 1-3, a wall mounted mains light switch (19) having a smoke detector (26,27) therein (see column 2, lines 48-50 and 63-71).

As to claim 18, the alarm in Montone is both a sounder (34) and a light (45) (see column 3, lines 4-6 and column 3, line 70 through column 4, line 4).

As to claim 19, the smoke detector (26,27) of Montone activates the light (45) to which the switch (19) relates as an alarm (see column 3, line 57 through column 4, line 4).

### ***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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15. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

16. Claims 3, 13, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peter in view of the international patent application publication of Vora (WO 96/12291).

As to claim 3, Peter discloses all of the claimed features, as set forth above, except for the face plate being arranged so that it can be retrofit to existing switch mountings. Vora, drawn to a touch responsive electric power controller with appliances, discloses, in Figure 12, a switch device with a face plate (19) arranged so that it can be retrofit to existing switch mountings (see page 43, lines 7-16). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to build the switch device of Peter, with a face plate and housing as taught by Vora, in order to allow the switch device to be easily used with existing switch fixtures.

As to claim 13, Vora discloses a switch device, in which the switching device is used to switch a light circuit and in which hardware within the light circuit provides a gradual ramping up of current to the light (see page 11, lines 13-17).

As to claim 33, the switch of Vora is programmable by the user (see page 6, lines 6-10).

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17. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Montone in view of the US patent of Dickie et al. (5,753,983).

Montone discloses all of the claimed features, as set forth above, except for the switch including a passive infrared (PIR) pyro sensor element or other movement and heat sensing device. Dickie, drawn to a multi-function control switch for electrically operating devices, discloses, in Figure 1, a wall mounted mains light switch (100) including a passive infrared (PIR) pyro sensor element (140) which, with a sounder, acts as a burglar alarm/deterrent (see column 7, lines 22-26 and 38-39). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to build the switch of Montone with the PIR pyro sensor element of Dickie, in order to make a home more secure without needing additional equipment.

18. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Montone in view of the US patent of Mack et al. (4,396,011).

Montone discloses all of the claimed features, as set forth above, except for the switch being connected to a pad capable of vibrating on application of electrical power. Mack, drawn to a heating pad, discloses, in Figures 1-9, a switch (27) connected to a pad (19) capable of vibrating on application of electrical power (see column 2, lines 47-53; column 4, lines 56-59; and column 5, lines 40-45). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to connect a vibrating pad to the switch of Montone, as taught by Mack, instead of the pad having its own switch, in order to reduce the number of parts.

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19. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peter in view of Vora, and further in view of the US patent of Griffin, Jr. et al. (6,434,450).

Peter in view of Vora disclose all of the claimed features, as set forth above, except for the programming of the switch being effected by the user selecting a function from a list of functions and logging the selection on the switch. Griffin, Jr. et al., drawn to an in-vehicle integrated information system, discloses a user-programmable switch wherein the programming of the switch is effected by the user selecting a function from a list of functions and logging the selection on the switch (see column 11, lines 40-46). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to effect the programming of the switch device of Peter in view of Vora by the user selecting a function from a list of functions and logging the selection on the switch, as taught by Griffin, Jr., in order to make the switch more user-friendly.

***Allowable Subject Matter***

20. Claims 5-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

21. The following is a statement of reasons for the indication of allowable subject matter:

Claim 5 contains allowable subject matter because none of the prior art of record discloses the software being arranged to filter out noise and/or frequency drift, in combination with the remaining claimed features.

Claim 6 contains allowable subject matter because none of the prior art of record discloses the frequency from the oscillator being recalculated at fixed periods by the microcontroller, in combination with the remaining claimed features.

Claim 7 contains allowable subject matter because none of the prior art of record discloses the software within the micro-controller automatically detecting the frequency of the mains supply to which it is connected, via an AC zero detector circuit, in combination with the remaining claimed features.

Claim 8 contains allowable subject matter because it depends from claim 7.

### ***Conclusion***

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The US patent of Burek et al. (4,167,688) discloses a similar integrated switch and smoke detector unit.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal I. Kaplan whose telephone number is 571-272-8587. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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